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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _27 February 2008_.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-6,9,11-19,26,29,35,38-45,47-65 and 67-73_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☒ Claim(s) _18_ is/are allowed.
6)☒ Claim(s) _1-6,9,11-17,19,26,29,35,38-45,47-65 and 67-73_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   This action is in response to the amendment filed on 2/27/2008.

2.   Claims 1-6, 9, 11-19, 26, 29, 35, 38-45, 47-65, and 67-73 are pending (claims 7-8, 10, 20-

25, 27-28, 30-34, 36-37, 46, and 66 were cancelled).

4.   Claim 18 is allowed.

5.   Claims 2-3, 9, 12-13, 26, 29, 49-51, 54-56, and 58 remian rejected under 102 (e).

6.   Claims 1, 4-6, 11, 14-17, 19, 35, 38-45, 47-48, 52-53, 57, 59-65, and 67-73 are

remain rejected under 103 (a).

Claim Objections

7.   Claims 47, 48, and 49 are objected to because of the following informalities:

- in claims 47 and 48, line 1, "46" should be changed to "38"; and

- in claim 49, line 4, "At" should be changed to "at."

Claim Rejections - 35 USC § 102

8.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

9.   **Claims 2-3, 9, 12-13, 26, 29, 49-51, 54-56, and 58** are rejected under 35 U.S.C. 102(e) as

being anticipated by Zhang et al. ("Zhang") (US 6,795,506 B1).

Regarding **claim 2**, as shown in Fig. 2, Zhang teaches a method for generating and

transmitting bit rate conversion information, the method comprising:

Receiving a sequence of media signals (bitstream comprising video program V1), the

sequence of media signals to be transmitted over a communication channel (a medium 70) (col.

8, lines 43-45, 54-62).

Applying at least two bit rate conversion schemes on the sequence of media signals (col.

8, lines 45-51 and col. 14, lines 34-42, 54-col. 15, lines 1-16).

Analyzing the results of the appliance of the at least two bit rate conversion schemes to

provide bit rate conversion information (the results of encoding must be analyzed in order for the

coding statistics information describing coding conditions of the video data for V1 to be

provided, col. 8, lines 45-51 and col. 14, lines 34-42, 54-col. 15, lines 1-16).

Transmitting at least a portion of the bit rate conversion information over the

communication channel along with the sequence of media signals (a portion of the coding

statistics information along with the video data for V1 is transmitted in a multiplexed

compressed bit stream, col. 8, lines 47-62).

Regarding **claim 3**, Zhang teaches that the step of transmitting at least a portion of the bit

rate conversion information is preceded by a step of multiplexing at least a portion of the bit rate

conversion information with the sequence of media signals (col. 8, lines 51-54).

Regarding **claim 9**, as shown in Fig. 3A, Zhang further teaches that the media signals are signals representative of visual and audio information.

Claims 12 and 13 are method claims containing similar limitations as method claims 2 and 3, respectively, and are therefore rejected under the same season set forth in the rejection of claims 2 and 3, respectively.

Regarding **claim 26**, as shown in Fig. 2, Zhang teaches a method for modifying a bit rate of a sequence of media signals such that the bit rate of the sequence of media signals does not exceed an available bandwidth of a communication channel, the method comprising the steps of:

Receiving, at a headend (a network device 92), the sequence of media signals (the compressed multiplex bitstream received from network device 58), bandwidth information (bandwidth information of a channel between network 92 and decoder 52 must be received in order for the network device 92 to transmit the video program to decoder 52) and bit rate conversion information (coding statistics information generated by network device 58), wherein the sequence of media signals comprising at least two media signals (V1 and V2), each of the at least two media signals associated with bit rate conversion information (col. 8, lines 43-56), and wherein the media signals and the bit rate conversion information are received over a communication channel (a channel between network devices 58 and 92) from a distribution center (network device 58). See col. 8, lines 43-62, col. 9, lines 51-61, and col. 10, lines 28-30.

Selecting at least one of the at least two media signals to be provided to the channel

having the available bandwidth (V1 is selected to be provided to the decoder 52 over a channel

between network device 92 and decoder 52, col. 10, lines 27-46).

Determining whether to convert the bit rate of the sequence of media signals in view of

bandwidth information and the bit rate conversion information (col. 10, lines 27-46, col. 21, lines

52-62, and col. 22, lines 3-16).

Converting the bit rate of the sequence of media signals in response to the determination

and in response to the selection (col. 10, lines 27-46, col. 21, lines 52-62, and col. 22, lines 3-16).

Wherein each of the bit rate converted media signals is representative of at least a portion

of a program (col. 8, lines 43-56, col. 9, lines 25-36, and col. 10, lines 28-32).

Wherein the step of receiving is preceded by a step of multiplexing the at least two

media signals (col. 8, lines 43-56).

Wherein the step of multiplexing is preceded by a step of generating bit rate conversion

information (col. 8, lines 43-56).

Claim 29 contains limitations similar to that of claim 26 and is rejected under the same

reason set forth in the rejection of claim 26 with the addition that the bit rate conversion

information is generated by a central analyzer (encoders 64a and 64b, collectively) at a

distribution center (network device 58) and multiplexed with the media signals at the distribution

center (col. 8, lines 43-56, col. 9, lines 25-36, and col. 12, lines 28-31, 47-49).

Claims 49-51, and 54-56 are apparatus claims containing limitations similar to claims 38-40, and 43-45, respectively, (at least one stream of media signals reads on bitstream V1 in Fig. 2, col. 8, lines 43-51) and are therefore rejected under the same reason set forth in the rejection of claims 38-40, and 43-45, respectively.

Regarding **claim 58**, it is inherent that the apparatus (network device 58 in Fig. 2) must be located within a central distribution center.

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11.   **Claims 1, 6, 11, 16, 17, 19, 38-40, 43-45, 47-48, 57, 59, 60-65, and 67-70** are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. ("Zhang") (US 6,795,506 B1) in view of Worthington et al. ("Worthington") (USPN 6,937,323 B2).

Regarding **claim 1**, as shown in Fig. 2, Zhang teaches a method for generating and transmitting bit rate conversion information, the method comprising:

Receiving a sequence of media signals (bitstream comprising video program V1), the

sequence of media signals to be transmitted over a communication channel (a medium 70) (col.

8, lines 43-45, 54-62).

Applying at least two bit rate conversion schemes on the sequence of media signals (col.

8, lines 45-51 and col. 14, lines 34-42, 54-col. 15, lines 1-16).

Analyzing the results of the appliance of the at least two bit rate conversion schemes to

provide bit rate conversion information (the results of encoding must be analyzed in order for the

coding statistics information describing coding conditions of the video data for V1 to be

provided, col. 8, lines 45-51 and col. 14, lines 34-42, 54-col. 15, lines 1-16).

Although Zhang further teaches that the bit rate conversion is to be sent to a single

controller (network device 92) that determines whether to apply bit rate conversion schemes in

response to bit rate conversion information (col. 10, lines 28-46), Zhang does not explicitly teach

multiple controllers as recited in the claim.

However, in analogous art shown in Fig. 1, Worthington teaches a distributing system for

distributing information from a central source to multiple receivers, wherein the system includes

a computer 106 and a central data repository server 110 (collectively, equivalent to a central

analyzer) sending test results (equivalent to the bit rate information) to multiple terminal 112s

(equivalent to multiple controllers). See col. 4, lines 28-33.

Therefore, it would have been obvious to one skilled in the art at the time the

invention was made to modify the teaching of Zhang by applying Worthington's concept of a

distributing information from a central source to multiple receivers such that the bit rate

information would be sent to multiple controllers that determine whether to apply bit rate

conversion schemes in response to bit rate conversion information as recited in the claim. The

suggestion/motivation to do so would have been to analyze data at a central processing unit and

distribute the analysis to the multiple remote receivers as taught by Worthington (lines 8-10 of

the Abstract).

Regarding **claim 6**, Zhang teaches that the bit rate conversion schemes are selected

from removing filler packets, removing filler frames, and removing stuffing bits (removing

redundant information inherent in video sequences, col. 14, lines 34-44).

Claims 11 and 16 are method claims containing similar limitations as method claims

1 and 6, respectively, and are therefore rejected under the same season set forth in the rejection

of claims 1 and 6, respectively.

Regarding **claim 17**, it is inherent that the steps of applying and analyzing are

repeated to produce bit rate conversion information indicative of results of an appliance of a

sequence of bit rate conversion schemes on the at least one media stream since multiple

compression algorithms are applied in order to generate the bit rate conversion information,

which comprises the coding statistics information including parameters (col. 14, lines 34-col. 15,

lines 1-16).

Regarding **claim 19**, as shown in Fig. 3A, Zhang further teaches that the media signals are signals representative of visual and audio information.

Regarding **claims 38 and 48** , as shown in Fig. 2, Zhang teach an apparatus for generating and transmitting bit rate conversion information from a distribution center (network device 58) to a headend (network device 92), the apparatus comprising:

At least one bit rate converter (encoder 64a) for receiving a sequence of media signals (V1) to be transmitted to the headend (network device 92) over a communication channel (a channel between devices 58 and 92), and for applying at least one bit rate conversion scheme on the sequence of media signals to provide a bit rate converted sequence of media signals (col. 8, lines 43-56, col. 9, lines 25-36, and col. 12, lines 28-40 and 47-54, and Fig. 3A, col. 14, lines 34-44).

At least one bit rate conversion analyzer (processing apparatus 253 in Fig. 3A), coupled to the at least one bit rate converter, for received and analyzing the bit rate converted sequence of media signals and providing bit rate conversion information (the processing apparatus 253 collects and outputs the bit rate information 262, col. 12, lines 28-40 and 47-54).

Although Zhang teaches transmitting the bit rate conversion information and the sequence of media signals to a receiver (network device 92 in Fig. 2), Zhang does not explicitly teach multiple controllers as recited in the claim.

However, in analogous art shown in Fig. 1, Worthington teaches a distributing system for distributing information from a central source to multiple receivers, wherein the system includes a computer 106 and a central data repository server 110 (collectively, equivalent to the

apparatus) sending test results (equivalent to the bit rate information and the sequence of media

signals, collectively) to multiple terminal 112s (equivalent to multiple receivers which are local

distribution centers). See col. 4, lines 28-33.

Therefore, it would have been obvious to one skilled in the art at the time the

invention was made to modify the teaching of Zhang by applying Worthington's concept of a

distributing information from a central source to multiple receivers such that the bit rate

information and the sequence of media signals would be sent to multiple receivers as recited in

the claim. The suggestion/motivation to do so would have been to distribute data from a central

processing unit to the multiple remote receivers as taught by Worthington (lines 8-10 of the

Abstract).

Regarding **claim 39**, Zhang further teaches a transmitter (68 in Fig. 2), coupled between

the at least one bit rate conversion analyzer and the communication channel, for receiving and

transmitting over the communication channel at least a portion of the bit rate conversion

information (col. 8, lines 51-56 and col. 9, lines 25-27).

Regarding **claim 40**, Zhang further teaches a multiplexer (the scheduler 66) that receives

and multiplexes the sequence of media signals and at least a portion of the bit rate conversion

information (col. 8, lines 56-56).

Regarding **claim 43**, Zhang teaches that the bit rate conversion schemes are selected

from removing filler packets, removing filler frames, and removing stuffing bits (removing

redundant information inherent in video sequences, col. 14, lines 34-44).

Regarding **claim 44**, it is inherent that at least one pair of bit rate converter (252 in

Fig. 3A) and bit rate conversion analyzer (253 in Fig. 3A) apply a sequence of bit rate

conversion schemes on a sequence of media signals and provide bit rate conversion information

indicative of results of an appliance of a sequence of bit rate conversion schemes on the at least

one media stream since multiple compression algorithms are applied in order to generate the bit

rate conversion information, which comprises the coding statistics information including

parameters (col. 12, lines 28-40 and 47-54, and col. 14, lines 34-col. 15, lines 1-16).

Regarding **claim 45**, as shown in Fig. 3A, Zhang further teaches that the media signals

are signals representative of visual and audio information.

Regarding **claim 47**, it is inherent that the apparatus (network device 58 in Fig. 2) is

located within a central distribution center.

Claims 57 and 59 are apparatus claims containing limitations similar to claims 46 and

47, respectively, (at least one stream of media signals reads on bitstream V1 in Fig. 2, col. 8,

lines 43-51) and are therefore rejected under the same reason set forth in the rejection of claims

46 and 47, respectively.

Regarding **claim 60**, as shown in Fig. 5A, Zhang teaches an apparatus for modifying a bit

rate of a sequence of media signals such that the bit rate of the sequence of media signals does

not exceed an available bandwidth of a communication channel (a channel connecting network

device 92 to one of the decoders 52-56 in Fig. 2), the apparatus comprising:

A controller (409), coupled to a bit rate converter (406), for receiving bit rate conversion

information and bandwidth information (bandwidth information of a channel between network

92 and decoder 52 must be received in order for the rate controller 409 to determine whether to

apply bit rate conversion to a particular compressed bitstream) and for determining whether to

convert the bit rate of the sequence of media signals (a compressed bitstream) in response to the

bandwidth information and the bit rate conversion information; wherein the bit rate conversion

information is provided from a central analyzer (network device 58 in Fig. 2). See col. 8, lines

43-56, col. 10, lines 27-46, col. 21, lines 52-62, and col. 22, lines 3-16.

The bit rate converter (406), coupled to the controller (409), for receiving the sequence of

media signals, and for converting the bit rate of the sequence of media signals, in response to the

determination (col. 21, lines 52-62).

Although Zhang further teaches that the bit rate conversion is to be sent to a single

controller (rate controller 409 in Fig. 5A of the network device 92 in Fig. 2), Zhang does not

explicitly teach multiple controllers as recited in the claim.

However, in analogous art shown in Fig. 1, Worthington teaches a distributing system for

distributing information from a central source to multiple receivers, wherein the system includes

a computer 106 and a central data repository server 110 (collectively, equivalent to a central

analyzer) sending test results (equivalent to the bit rate information) to multiple terminal 112s

(equivalent to multiple controllers). See col. 4, lines 28-33.

Therefore, it would have been obvious to one skilled in the art at the time the

invention was made to modify the teaching of Zhang by applying Worthington's concept of a

distributing information from a central source to multiple receivers such that the bit rate

information would be sent to multiple controllers as recited in the claim. The

suggestion/motivation to do so would have been to analyze data at a central processing unit and

distribute the analysis to the multiple remote receivers as taught by Worthington (lines 8-10 of

the Abstract).

Regarding **claim 61**, as shown in Fig. 2, Zhang teaches that the sequence of media signals

comprising at least two media signals (V1 and V2), each of the at least two media signals

associated with bit rate conversion information (col. 8, lines 43-56).

Regarding **claim 62**, Zhang teaches that each of the at least two bit rate sequences of

media signals is representative of at least a portion of a program (col. 8, lines 43-56, col. 9, lines

25-36, and col. 10, lines 28-32).

Regarding **claim 63**, Zhang teaches that the apparatus (network device 92 in Fig. 2) selects at least one of the at least two sequences to be provided to the channel (a channel connecting network device 92 to one of the decoders 52-56 in Fig. 2) (col. 10, lines 28-46).

Regarding **claim 64**, as shown in Fig. 5A, Zhang further teaches multiplexer (scheduler 411), coupled between the communication channel (a channel connecting network device 92 to one of the decoders 52-56 in Fig. 2) and the bit rate converter (406), for multiplexing the at least two sequences of media signals (col. 21, lines 52-62).

Regarding **claim 65**, Zhang teaches that the bit rate conversion schemes are selected from removing filler packets, removing filler frames, and removing stuffing bits (removing redundant information inherent in video sequences, col. 14, lines 34-44).

Regarding **claim 67**, Zhang teaches that the bit rate conversion information is multiplexed with the media signals (col. 8, lines 47-56).

Regarding **claim 68**, the combined teaching of the Zhang and Worthington does not teach that the media signals are associated with priority criteria, and that the step of converting the media signals is further based upon a priority associated with the media signals.

However, an official notice is taken that it is well known in the art that there are different levels of quality associated with media signals, and these quality levels usually relate to different

priority levels which need to be maintained by a network operator for customer satisfaction.

Therefore, it would have been obvious to one skilled in the art to include that the media are

associated with priority criteria, and that the step of converting the media signals is further based

upon a priority associated with the media signals in order to maintain a certain signal quality to

ensure customer satisfaction.

Regarding **claims 69 and 70**, Zhang teaches that the media signals are MPEG compliant

signals and arranged in MPEG compliant transport packets (col. 12, lines 28-40 and col. 15, lines

45-49).

12.   **Claims 4-5, 14-15, 41-42, and 52-53** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Zhang et al. ("Zhang") (US 6,795,506 B1) in view of the admitted prior art.

Regarding **claims 4 and 41**, Zhang teaches that the bit rate conversion information

indicates (a) the at least two bit rate conversion schemes applied on the sequence of media

signals (col. 8, lines 51-54 and col. 14, lines 34-42, 54-col. 15, lines 1-16). Although Zhang

teaches that a receiver of the bit rate conversion information such as a network device 92 uses

the information to convert the bit rate of the compressed bitstream to help the multiplexed

bitstream fit within the allowable bandwidth between the network device 92 and a decoder 52

(col. 10, lines 28-32), Zhang does not explicitly teach that the information also includes (b) at

least two amounts of bit rate conversion resulting from the appliance of the at least two bit rate conversion schemes.

In an analogous structure shown in Fig. 1 in which a unit receiving bit rate conversion information, such as controller, also uses the information to enable media transmission over an available bandwidth of a downstream channel, the admitted prior art teaches that bit rate conversion information to be transmitted to, also includes at least two amounts of bit rate conversion resulting from the appliance of the at least two bit rate conversion schemes (the at least two amounts read on information that reflects the amount of actual bit rate conversion that can be achieved by applying bit rate conversion techniques, paragraph 0013).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify the teaching of Zhang to include at least two amounts of bit rate conversion resulting from the appliance of the at least two bit rate conversion schemes in the bit rate conversion information in order to notify a receiver of the bit rate conversion information of at least two bit rate conversion amounts that are achieved by applying at least two bit rate conversion schemes.

Regarding **claims 5 and 42**, Zhang teaches that the bit rate conversion information further indicates at least one quality loss resulting from the appliance of the at least two bit rate conversion schemes (col. 14, lines 34-57).

Claims 14 and 15 are method claims containing similar limitations as method claims 4 and 5, respectively, and are therefore rejected under the same season set forth in the rejection of claims 4 and 5, respectively.

Claims 52 and 53 are apparatus claims containing limitations similar to claims 41 and 42, respectively, (at least one stream of media signals reads on bitstream V1 in Fig. 2, col. 8, lines 43-51) and are therefore rejected under the same reason set forth in the rejection of claims 41 and 42, respectively.

13.   **Claims 35 and 71** are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. ("Zhang") (US 6,795,506 B1).

Claim 35 contains limitations similar to that of claim 26 is rejected under the same reason set forth in the rejection of claim 26 with the addition that the media signals are MPEG compliant signals and arranged in MPEG compliant transport packets (col. 12, lines 28-40 and col. 15, lines 45-49). Zhang further teaches that the bit rate conversion information is embedded within the transport packets at a distribution center (transport stream 326 in Fig. 4A must include transport packets, col. 8, lines 45-56 and col. 15, lines 45-49), however, Zhang does not teach that the bit rate conversion is embedded within the headers of the transport packets.

An official notice is taken that it is well known in the art to embed any information

related to payload processing, such as control information, within the header of a packet to assist

a receiving party in processing the packet payload. Therefore, it would have been obvious to one

skilled in the art at the time the invention was made to modify the teaching of Zhang such that

the bit rate conversion information would be embedded within the header of the transport packets

as recited in the claim. The suggestion/motivation to do so would have been to transmit the bit

rate conversion information to a receiving party in order to assist in processing, i.e.

decompressing, the packet payload, and such modification involves only routine skill in the art.

Claim 71 is an apparatus claim corresponding to method claim 35 and is rejected under

the same reason set forth in the rejection of claim 35 with the addition of a controller (rate

controller 409 in Fig. 5A, col. 21, lines 52-62) and a bit rate controller (bit rate controller 406 in

Fig. 5A, col. 21, lines 52-62).

14.   **Claims 72 and 73** are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang

(US 6,795,506 B1) in view of an art of record, Linzer et al. ("Linzer") (USPN 6,038,256).

Regarding **claim 72**, as shown in Fig. 5A, Zhang teaches an apparatus for modifying a bit

rate of a sequence of media signals such that the bit rate of the sequence of media signals does

not exceed an available bandwidth of a communication channel (a channel connecting network

device 92 to one of the decoders 52-56 in Fig. 2), the apparatus comprising:

A controller (409), coupled to a bit rate converter (406), for receiving bit rate conversion

information and bandwidth information (bandwidth information of a channel between network

92 and decoder 52 must be received in order for the rate controller 409 to determine whether to

apply bit rate conversion to a particular compressed bitstream) and for determining whether to

convert the bit rate of the sequence of media signals (a compressed bitstream) in response to the

bandwidth information and the bit rate conversion information; wherein the bit rate conversion

information is provided from a central analyzer (network device 58 in Fig. 2). See col. 8, lines

43-56, col. 10, lines 27-46, col. 21, lines 52-62, and col. 22, lines 3-16).

The bit rate converter (406), coupled to the controller (409), for receiving the sequence of

media signals, and for converting the bit rate of the sequence of media signals, in response to the

determination (col. 21, lines 52-62 and col. 22, lines 3-16).

However, Zhang does not teach the apparatus modifies bit rate conversion information to

reflect bit rate conversion schemes that were applied by the bit rate converter.

Linzer, as shown in Fig. 6, teaches that an apparatus (a statistical multpliexer 70) that

modifies statistics as a posteriori statistics (equivalent to bit rate conversion information) to

reflect the complexity involved in re-encoding the reproduced video signals at respective

transcoders (equivalent to bit rate conversion schemes that were applied by a converter) (col. 9,

lines 6-28).

Given the teaching of Linzer, it would have been obvious to one skilled in the art at

the time the invention was made to modify the teaching of Zhang to incorporate the teaching of

Linzer such that the apparatus would modify bit rate conversion information to reflect bit rate

conversion schemes that were applied by the bit rate converter. The suggestion/motivation to do

so would have been to enable the apparatus to utilize both the a priori and a posteriori statistics

(equivalent to original bit rate information and modified bit rate information, respectively) in

transporting combined re-compressed video bit streams (equivalent to the media signals with

modified bit rate) as taught by Linzer (col. 9, lines 23-28).

Regarding **claim 73**, Zhang further teaches that the bit rate conversion information being

indicative of results of an appliances of sequence of bit rate conversion schemes on the sequence

of media signals (col. 8, lines 45-56, col. 9, lines 25-27, and col. 14, lines 34-46).

Response to Arguments

15.   Applicant's arguments filed 2/27/2008 have been fully considered but they are not

persuasive.

A.   In the Remarks regarding claims 2 and 38, applicant argues that Zhang teaches away

from the invention and fails to teach transmitting at least a portion of the bit rate conversion

information along with the sequence of media signals because what is transmitted in Zhang is the

compressed sequence of media signals, not the sequence of media signals itself.

In response, the Examiner respectfully disagrees. Note that the claims do not exclude a

situation in which the bitstream being transmitted with the bit rate conversion information is in a

compressed format or in a format that is different from when it was received. Although the

claims are interpreted in light of the specification, limitations from the specification are not read

into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Since the claims similarly disclose transmitting at least a portion of the bit rate

conversion information along with the sequence of media signals which corresponds to Zhang's

teaching on transmitting a portion of the coding statistics information along with the video data

for V1 in a multiplexed compressed bit stream (col. 8, lines 47-62), it is respectfully submitted

that the compressed bitstream video data for V1 being transmitted with the coding statistics

information is still the received bitstream that carries video data for V1 but only in a different

format – compressed format.

Accordingly, it is submitted that all claim limitation is met and the rejection is

maintained.

B.   In the Remarks regarding claim 26, applicant argues that Zhang teaches away from the

invention and fails to teach receiving the sequence of media signals because the received

sequence of media signals in Zhang is the compressed sequence of media signals.

In response, the Examiner respectfully disagrees. Note that the claim does not exclude a

situation in which the received bitstream is a compressed bitstream. Although the claims are

interpreted in light of the specification, limitations from the specification are not read into the

claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Therefore, the step of receiving, at a headend, the sequence of media signals is met by

Zhang - a network device 92 in Fig. 2 receives the compressed multiplex bitstream from network

device 58 (col. 8, lines 43-62, col. 9, lines 25-31, 51-61, and col. 10, lines 28-30). The rejection

is maintained.

C.   In the remarks regarding claim 1, the applicant argues that Zhang does not teach or

suggest sending bit rate conversion information to one or more controllers that determines

whether to apply bit rate conversion in response to the bit rate conversion information and that

the combination of Worthington and Zhang is not obvious since Worthington does not teach a

system of providing large volume of media data.

In response, the Examiner respectfully disagrees.   Note that the claim does not exclude a

situation in which the sequence of media signals is a compressed bitstream. Although the claims

are interpreted in light of the specification, limitations from the specification are not read into the

claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Therefore,

Zhang clearly teaches that the bit rate conversion is to be sent to a single controller (network

device 92) that determines whether to apply bit rate conversion schemes in response to bit rate

conversion information (col. 10, lines 28-46 – "the network device 92 may also convert the bit

rate of one or more compressed bitstreams to help the multiplexed bitstream fit within the

allowable bandwidth between the network device 92 and one of the targets decoders 52, 54, and

56...The network device 92 receives the compressed bitstreams provided by the transmitters 68

and 76, ..and re-multiplexes the compressed bitstreams including programs 1 and V3 to provide a

multiplexed compressed bitstream including programs V1 and V3. The network device 92 also

obtains the bit rate information as produced by the network device 58 and network device 60 for

each of those compressed bitstreams uses the information to facilitate re-multiplexing..").

In response to applicant's argument that there is no suggestion to combine the references,

the examiner recognizes that obviousness can only be established by combining or modifying the

teachings of the prior art to produce the claimed invention where there is some teaching,

suggestion, or motivation to do so found either in the references themselves or in the knowledge

generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5

USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir.

1992). In this case, what Zhang does not explicitly teach is transmitting information to multiple

controllers as recited in the claim. In analogous art shown in Fig. 1, Worthington teaches a

distributing system for distributing information from a central source to multiple receivers,

wherein the system includes a computer 106 and a central data repository server 110

(collectively, equivalent to a central analyzer) sending test results (equivalent to the bit rate

information) to multiple terminal 112s (equivalent to multiple controllers). See col. 4, lines 28-

33. (Note also that Worthington is considered as nonanalogous art because it has been held that

a prior art reference must either be in the field of applicant's endeavor or, if not, then be

reasonably pertinent to the particular problem with which the applicant was concerned, in order

to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977

F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992)).

Therefore, it would have been obvious to one skilled in the art at the time the

invention was made to modify the teaching of Zhang by applying Worthington's concept of a

distributing information from a central source to multiple receivers such that the bit rate

information would be sent to multiple controllers that determine whether to apply bit rate

conversion schemes in response to bit rate conversion information as recited in the claim. The

suggestion/motivation to do so would have been to analyze data at a central processing unit and

distribute the analysis to the multiple remote receivers as taught by Worthington (lines 8-10 of

the Abstract). Such modification will not yield any unexpected results.

Accordingly, it is respectfully submitted that the combined teaching of Zhang and

Worthington teaches all limitations as claimed and the rejection under 103 is proper. Further, the

applicant fails to point out an error in the motivation. Thus, the rejection is sustained.

D.   In the remarks regarding claim 60, the applicant argues that the combined teaching of

Zhang and Worthington does not teach or suggest a bit rate converter that is adapted to receive

the sequence of media signals and to convert the bit rate thereof in response to a determination,

wherein the determination is made by a controller in response to the bit rate conversion

information and to bandwidth information and that the combination of Worthington and Zhang is

not obvious.

In response, the Examiner respectfully disagrees. Note that the claim does not exclude a

situation in which the sequence of media signals is a compressed bitstream. Although the claims

are interpreted in light of the specification, limitations from the specification are not read into the

claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

As shown in Fig. 5A, Zhang clearly teaches a controller (409), coupled to a bit rate

converter (406), for receiving bit rate conversion information and bandwidth information

(bandwidth information of a channel between network 92 and decoder 52 must be received in

order for the rate controller 409 to determine whether to apply bit rate conversion to a particular

compressed bitstream) and for determining whether to convert the bit rate of the sequence of

media signals (a compressed bitstream) in response to the bandwidth information and the bit rate

conversion information; wherein the bit rate conversion information is provided from a central

analyzer (network device 58 in Fig. 2). See col. 8, lines 43-56, col. 10, lines 27-46 – "the

network device 92 may also convert the bit rate of one or more compressed bitstreams to help the

multiplexed bitstream fit within the allowable bandwidth between the network device 92 and one

of the targets decoders 52, 54, and 56...The network device 92 receives the compressed

bitstreams provided by the transmitters 68 and 76, ..and re-multiplexes the compressed

bitstreams including programs 1 and V3 to provide a multiplexed compressed bitstream

including programs V1 and V3. The network device 92 also obtains the bit rate information as

produced by the network device 58 and network device 60 for each of those compressed

bitstreams uses the information to facilitate re-multiplexing..", col. 21, lines 52-62 – "..More

specifically, based on messages received from the rate controller 409, the bit rate converter

apparatus 406 adjusts the bit rate for each compressed bitstream. In one embodiment, the

objective of the rate controller 409 is to determine whether to apply more aggressive transcoding

and bit rate conversion to a particular compressed bitstream and use the saved bandwidth

resulting therefrom for a different compressed bitstream", and col. 22, lines 3-16 –"The rate

controller 409 relies on the bit rate information extracted by the extractor apparatus 404..The rate

controller 409 may also rely on information regarding the channel that the output re-multiplexed

bitstream 415 is to be transmitted onto..A control signal is provided by the rate controller 409 to

the bit rate converter apparatus 406 and the scheduler 411..." Zhang further teaches the bit rate

converter (406), coupled to the controller (409), for receiving the sequence of media signals, and

for converting the bit rate of the sequence of media signals, in response to the determination (col.

21, lines 52-62 and col. 22, lines 3-16 - "…A control signal is provided by the rate controller

409 to the bit rate converter apparatus 406 and the scheduler 411...").

Regarding the combination of Zhang and Worthington, please see the response in section C above.

Accordingly, it is respectfully submitted that the combined teaching of Zhang and Worthington teaches all limitations as claimed and the rejection under 103 is proper. Further, the applicant fails to point out an error in the motivation. Thus, the rejection is sustained.

E.   In the remarks regarding claim 72, the applicant argues that Zhang does not teach receiving bit rate conversion information which teaches of results of bit rate conversion which was not yet applied to the received sequence of media signals (as it was received) and a bit rate converter which is adapted to convert the bit rate of the sequence of media signals in a bit rate conversion scheme that is indicated in the bit rate conversion information though not yet applied to the sequence of media signals, and that a prima facie case of obviousness cannot be established.

In response, the Examiner restfully disagrees. It is noted that the features upon which applicant relies (i.e., (a) receiving bit rate conversion information which teaches of results of bit rate conversion which was not yet applied to the received sequence of media signals (as it was received) and (b) a bit rate converter which is adapted to convert the bit rate of the sequence of media signals in a bit rate conversion scheme that is indicated in the bit rate conversion information though not yet applied to the sequence of media signals) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

However, what the claim actually recites that is met by Zhang is as follows:

- A controller (409), coupled to a bit rate converter (406), for receiving bit rate

conversion information and bandwidth information (bandwidth information of a channel between

network 92 and decoder 52 must be received in order for the rate controller 409 to determine

whether to apply bit rate conversion to a particular compressed bitstream) and for determining

whether to convert the bit rate of the sequence of media signals (a compressed bitstream) in

response to the bandwidth information and the bit rate conversion information; wherein the bit

rate conversion information is provided from a central analyzer (network device 58 in Fig. 2).

See col. 8, lines 43-56, col. 10, lines 27-46 – "the network device 92 may also convert the bit rate

of one or more compressed bitstreams to help the multiplexed bitstream fit within the allowable

bandwidth between the network device 92 and one of the targets decoders 52, 54, and 56...The

network device 92 receives the compressed bitstreams provided by the transmitters 68 and 76,

..and re-multiplexes the compressed bitstreams including programs 1 and V3 to provide a

multiplexed compressed bitstream including programs V1 and V3. The network device 92 also

obtains the bit rate information as produced by the network device 58 and network device 60 for

each of those compressed bitstreams uses the information to facilitate re-multiplexing..", col. 21,

lines 52-62 – "..More specifically, based on messages received from the rate controller 409, the

bit rate converter apparatus 406 adjusts the bit rate for each compressed bitstream. In one

embodiment, the objective of the rate controller 409 is to determine whether to apply more

aggressive transcoding and bit rate conversion to a particular compressed bitstream and use the

saved bandwidth resulting therefrom for a different compressed bitstream", and col. 22, lines 3-

16 –"The rate controller 409 relies on the bit rate information extracted by the extractor

apparatus 404..<u>The rate controller 409 may also rely on information regarding the channel that</u> <u>the output re-multiplexed bitstream 415 is to be transmitted onto.</u>.<u>A control signal is provided by</u> <u>the rate controller 409 to the bit rate converter apparatus 406 and the scheduler 411</u>..."

- The bit rate converter (406), coupled to the controller (409), for receiving the sequence of media signals, and for converting the bit rate of the sequence of media signals, in response to the determination (col. 21, lines 52-62, and col. 22, lines 3-16 - "…<u>A control signal is provided</u> <u>by the rate controller 409 to the bit rate converter apparatus 406 and the scheduler 411</u>...").

However, what Zhang does not teach is that the apparatus modifies bit rate conversion information to reflect bit rate conversion schemes that were applied by the bit rate converter.

Linzer, as shown in Fig. 6, teaches that an apparatus (a statistical multpliexer 70) that modifies statistics as a posteriori statistics (equivalent to bit rate conversion information) to reflect the complexity involved in re-encoding the reproduced video signals at respective transcoders (equivalent to bit rate conversion schemes that were applied by a converter) (col. 9, lines 6-28).

Given the teaching of Linzer, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Zhang to incorporate the teaching of Linzer such that the apparatus would modify bit rate conversion information to reflect bit rate conversion schemes that were applied by the bit rate converter. The suggestion/motivation to do so would have been to enable the apparatus to utilize both the a priori and a posteriori statistics (equivalent to original bit rate information and modified bit rate information, respectively) in transporting combined re-compressed video bit streams (equivalent to the media signals with modified bit rate) as taught by Linzer (col. 9, lines 23-28).

Accordingly, it is respectfully submitted that the combined teaching of Zhang and Linzer teaches all limitations as claimed and a prima facie case of obviousness is properly established. Further, the applicant fails to point out an error in the motivation. Thus, the rejection is sustained.

Conclusion

16.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to NITTAYA JUNTIMA whose telephone number is 571.272.3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571.272.6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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